

Amendments to the Claims

1. (Currently Amended) A modular prosthesis for replacing an end portion of a bone, the prosthesis comprising:

a stem dimensioned to be received in the intramedullary canal of the bone;

a head having an outer wall defining an interior space dimensioned such that the head can be placed over an end portion of the stem, the outer wall having at least one opening, the outer wall being dimensioned such that the head can be moved in an axial direction in relation to an axis of the stem and the head can be moved in a transverse direction in relation to the axis of the stem when the head is placed over the end portion of the stem, the outer wall of the head of the prosthesis including a concave surface dimensioned to interface with another bone; and

a screw dimensioned to be arranged in each opening,

wherein each screw is suitable for contacting the end portion of the stem when arranged in its associated opening to secure the head to the stem by constraining movement of the head in the axial direction and in the transverse direction, and

wherein each opening is in a lateral direction in relation to the axis of the stem, and

wherein an interior surface of the outer wall of the head adjacent at least one opening is spaced from the end portion of the stem when the head is secured to the stem, and

wherein the end portion of the stem includes an end surface and a side surface extending away from the end surface, and

wherein at least one screw contacts the side surface of the end portion of the stem when the head is secured to the stem.

2. (Original) The prosthesis of claim 1 wherein:

each screw is a self-tapping screw suitable for tapping into the end portion of the stem,
and

each screw is inserted to a depth below a surface of the end portion of the stem to secure
the head to the stem.

3. (Canceled)

4. (Original) The prosthesis of claim 1 wherein:

the outer wall of the head has three openings, and two of the openings are on opposed
sides of the wall.

5. (Original) The prosthesis of claim 1 wherein:

the outer wall is dimensioned such that the head can be moved in a second transverse
direction in relation to the axis of the stem at an angle to the transverse direction when the head
is placed over the end portion of the stem, and

each screw is suitable for contacting the end portion of the stem when arranged in its
associated opening to constrain movement of the head in the second transverse direction.

6. (Original) The prosthesis of claim 1 wherein:

the prosthesis replaces a radial head.

7. (Currently Amended) The prosthesis of claim 6 wherein:

the head of the prosthesis is elliptical, and

~~the outer wall of the head of the prosthesis includes a~~ concave surface of the head is dimensioned to interface with the capitellum of the humerus and the outer wall of the head of the prosthesis includes a periphery surface dimensioned to interface with the radial notch of the ulna when the head of the prosthesis is secured to the stem.

8. (Currently Amended) A modular prosthesis for replacing an end portion of a bone, the prosthesis comprising:

a stem dimensioned to be received in the intramedullary canal of the bone;

a head having an outer wall defining an interior space dimensioned such that the head can be placed over an end portion of the stem, the outer wall having at least one opening, the outer wall being dimensioned such that the head can be moved in a first transverse direction in relation to an axis of the stem and the head can be moved in a second transverse direction in relation to the axis of the stem at an angle to the first transverse direction when the head is placed over the end portion of the stem, the outer wall of the head of the prosthesis including a concave surface dimensioned to interface with another bone; and

a screw dimensioned to be arranged in each opening,

wherein each screw is suitable for contacting the end portion of the stem when arranged in its associated opening to secure the head to the stem by constraining movement of the head in the first transverse direction and in the second transverse direction, and

wherein each opening is in a lateral direction in relation to the axis of the stem, and

wherein an interior surface of the outer wall of the head adjacent at least one opening is spaced from the end portion of the stem when the head is secured to the stem, and

wherein the end portion of the stem includes an end surface and a side surface extending away from the end surface, and

wherein at least one screw contacts the side surface of the end portion of the stem when the head is secured to the stem.

9. (Original) The prosthesis of claim 8 wherein:

the prosthesis replaces a radial head.

10. (Currently Amended) The prosthesis of claim 9 wherein:

the head of the prosthesis is elliptical, and

~~the outer wall of the head of the prosthesis includes a concave surface of the head is~~
dimensioned to interface with the capitellum of the humerus and the outer wall of the head of the prosthesis includes a periphery surface dimensioned to interface with the radial notch of the ulna when the head of the prosthesis is secured to the stem.

11-26. (Canceled)

27. (New) A modular prosthesis for replacing an end portion of a bone, the prosthesis comprising:

a stem dimensioned to be received in the intramedullary canal of the bone;

a head having an outer wall defining an interior space dimensioned such that the head can be placed over an end portion of the stem, the outer wall having at least one opening, the outer wall being dimensioned such that the head can be moved in an axial direction in relation to an axis of the stem and the head can be moved in a transverse direction in relation to the axis of the stem when the head is placed over the end portion of the stem; and

a screw dimensioned to be arranged in each opening,

wherein each screw is suitable for contacting the end portion of the stem when arranged in its associated opening to secure the head to the stem by constraining movement of the head in the axial direction and in the transverse direction, and

wherein each opening is in a lateral direction in relation to the axis of the stem, and

wherein an interior surface of the outer wall of the head adjacent at least one opening is spaced from the end portion of the stem when the head is secured to the stem, and

wherein the end portion of the stem includes an end surface and a side surface extending away from the end surface, and

wherein at least one screw contacts the side surface of the end portion of the stem when the head is secured to the stem, and

wherein the prosthesis replaces a radial head, and

wherein the head of the prosthesis is elliptical, and

wherein the outer wall of the head of the prosthesis includes a concave surface dimensioned to interface with the capitellum of the humerus and a periphery surface dimensioned to interface with the radial notch of the ulna when the head of the prosthesis is secured to the stem.

28. (New) The prosthesis of claim 27 wherein:

each screw is a self-tapping screw suitable for tapping into the end portion of the stem,
and

each screw is inserted to a depth below a surface of the end portion of the stem to secure the head to the stem.

29. (New) The prosthesis of claim 27 wherein:

the outer wall of the head has three openings, and two of the openings are on opposed sides of the wall.

30. (New) The prosthesis of claim 27 wherein:

the outer wall is dimensioned such that the head can be moved in a second transverse direction in relation to the axis of the stem at an angle to the transverse direction when the head is placed over the end portion of the stem, and

each screw is suitable for contacting the end portion of the stem when arranged in its associated opening to constrain movement of the head in the second transverse direction.

31. (New) A modular prosthesis for replacing an end portion of a bone, the prosthesis comprising:

a stem dimensioned to be received in the intramedullary canal of the bone;

a head having an outer wall defining an interior space dimensioned such that the head can be placed over an end portion of the stem, the outer wall having at least one opening, the outer wall being dimensioned such that the head can be moved in a first transverse direction in relation

to an axis of the stem and the head can be moved in a second transverse direction in relation to the axis of the stem at an angle to the first transverse direction when the head is placed over the end portion of the stem; and

a screw dimensioned to be arranged in each opening,

wherein each screw is suitable for contacting the end portion of the stem when arranged in its associated opening to secure the head to the stem by constraining movement of the head in the first transverse direction and in the second transverse direction, and

wherein each opening is in a lateral direction in relation to the axis of the stem, and

wherein an interior surface of the outer wall of the head adjacent at least one opening is spaced from the end portion of the stem when the head is secured to the stem, and

wherein the end portion of the stem includes an end surface and a side surface extending away from the end surface, and

wherein at least one screw contacts the side surface of the end portion of the stem when the head is secured to the stem, and

wherein the prosthesis replaces a radial head, and

wherein the head of the prosthesis is elliptical, and

the outer wall of the head of the prosthesis includes a concave surface dimensioned to interface with the capitellum of the humerus and a periphery surface dimensioned to interface with the radial notch of the ulna when the head of the prosthesis is secured to the stem.

32. (New) The prosthesis of claim 31 wherein:

each screw is a self-tapping screw suitable for tapping into the end portion of the stem,
and

each screw is inserted to a depth below a surface of the end portion of the stem to secure the head to the stem.

33. (New) The prosthesis of claim 31 wherein:

the outer wall of the head has three openings, and two of the openings are on opposed sides of the wall.